

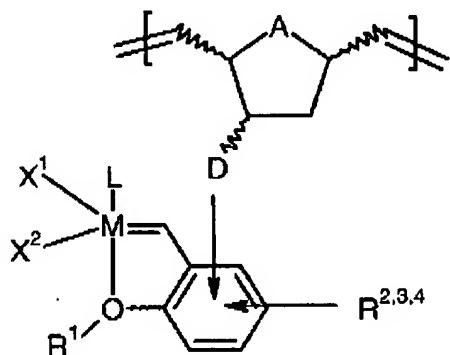
AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A polymeric transition metal catalyst comprising: a polymeric compound having a degree of polymerization numerical average value from 6 to 2000 and containing at least one transition metal catalyst comprising:

at least one structural unit of the formula (Ia):

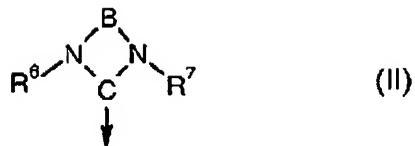


where;

M is a transition metal of the 8th transition group of the Periodic Table;

X¹ and X² are the same or different and are each chlorine, bromine or iodine;

L is an N-heterocyclic carbene ligand of the formula (II):



where the direction of the arrow is intended to represent the bond to M
and where;

B is a 1,2-ethanediyl or 1,2-ethenediyl radical which is
optionally mono- or disubstituted by C₁-C₄-alkyl, C₆-C₁₅-
arylalkyl or C₅-C₁₄-aryl; and

R⁶ and R⁷ are each independently C₁-C₂₀-alkyl or C₅-C₂₄-aryl;

R¹ is cyclic, straight-chain or branched C₁-C₂₀-alkyl or C₅-C₂₄-aryl;
and

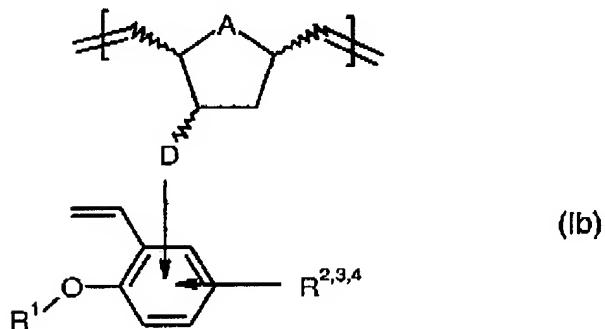
R², R³ and R⁴ are each independently hydrogen, C₁-C₂₀-alkyl, C₅-C₂₄-
aryl, halogen, C₁-C₄-fluoroalkyl, C₁-C₄-alkoxy, C₅-C₁₄-aryloxy,
(C₁-C₈-alkyl)OCO-, (C₁-C₈-alkyl)CO₂-, (C₅-C₁₄-aryl)OCO- or (C₅-
C₁₄-aryl)CO₂-; and/or

in each case two radicals in an ortho-arrangement to one another from the
group of R², R³ and R⁴ are part of a cyclic system which consists
of a carbon framework having 5 to 22 carbon atoms, one or more
carbon atoms of the cyclic system optionally being replaced by
heteroatoms from the group of sulphur, oxygen or nitrogen, and the
cyclic system also being optionally mono- or polysubstituted by
radicals selected from the group of halogen, C₁-C₄-fluoroalkyl, (C₁-

$\text{C}_4\text{-alkyl})\text{OCO-}$, $(\text{C}_1\text{-C}_8\text{-alkyl})\text{CO}_2^-$, $(\text{C}_6\text{-C}_{10}\text{-aryl})\text{OCO-}$ or $(\text{C}_5\text{-C}_{14}\text{-aryl})\text{CO}_2^-$; and

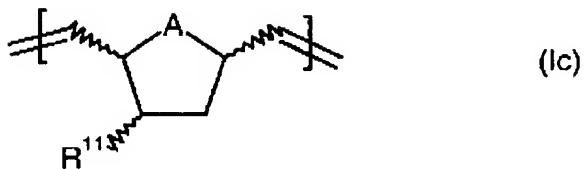
- A is oxygen, sulphur, sulphonyl, sulphonyl or CR^8R^9 where R^8 and R^9 are each independently hydrogen or $\text{C}_1\text{-C}_4\text{-alkyl}$; and
- D is $\text{C}_1\text{-C}_8\text{-alkylene}$, $[(\text{C}_1\text{-C}_8\text{-alkylene})\text{-O}]_n$ where $n = 1$ to 12, $(\text{C}_1\text{-C}_8\text{-alkylene})\text{CO}_2^-$, $(\text{C}_1\text{-C}_8\text{-alkylene})\text{-OCO-(C}_1\text{-C}_8\text{-alkylene)}$, $(\text{C}_1\text{-C}_8\text{-alkylene})\text{CO}_2^-(\text{C}_1\text{-C}_8\text{-alkylene})$, $(\text{C}_1\text{-C}_8\text{-alkylene})\text{CONR}^{10}-$, $(\text{C}_1\text{-C}_8\text{-alkylene})\text{NR}^{10}\text{CO-}$, $(\text{C}_1\text{-C}_8\text{-alkylene})\text{CONR}^{10}-(\text{C}_1\text{-C}_8\text{-alkylene})$ or $(\text{C}_1\text{-C}_8\text{-alkylene})\text{NR}^{10}\text{CO-(C}_1\text{-C}_8\text{-alkylene)}$ where R^{10} is hydrogen or $\text{C}_1\text{-C}_4\text{-alkyl}$; and

at least one structural unit of the formula (lb):



where A, D, R^1 , R^2 , R^3 and R^4 each independently have the same definitions and fulfil the same conditions as specified under the formula (la); and, optionally,

at least one structural units of the formula (lc):



where:

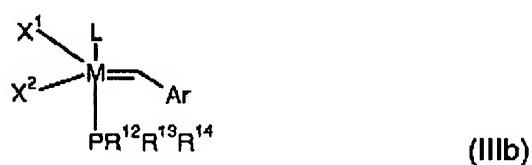
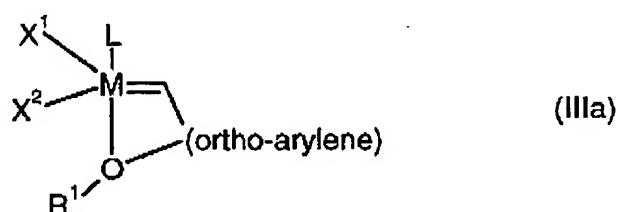
A has the same definition and fulfils the same conditions as specified under the formula (Ia) in Claim 1; and

R¹¹ is C₁-C₈-alkyl, [(C₁-C₈-alkylene)-O-]_n-(C₁-C₈-alkyl) where n = 1 to 12, (C₁-C₈-alkylene)CO₂-(C₁-C₈-alkyl), (C₁-C₈-alkylene)-OCO-(C₁-C₈-alkyl), (C₁-C₈-alkylene)-OCO-(C₅-C₁₄-aryl), (C₁-C₈-alkylene)CO₂-(C₅-C₁₄-aryl), (C₁-C₈-alkylene)CONR¹⁰-(C₁-C₈-alkyl), (C₁-C₈-alkylene)NR¹⁰CO-(C₁-C₈-alkyl), (C₁-C₈-alkylene)-CONR¹⁰-(C₅-C₁₄-aryl) or (C₁-C₈-alkylene)NR¹⁰CO-(C₅-C₁₄-aryl) where R¹⁰ is hydrogen or C₁-C₄-alkyl.

2. (Cancelled)
- 3.* (Previously Presented) The polymeric compound according to one or more of Claims 1 further comprising at least one structural unit derived from olefins suitable for ring-opening metathesis polymerization.
4. (Cancelled)
5. (Previously Presented) The polymeric compound according to Claim 1, wherein A, D, M, L, X1 and X2 and R1, R2, R3, R4 and R11 radicals present in the structural units of the formulae (Ia), (Ib) and (Ic) are identical.

6. (Previously Presented) The polymeric compound according to Claim 1, wherein the average proportion by weight of structural units of the formula (Ia) and (Ib) and (Ic) present is 80% or more.
7. (Previously Presented) The polymeric compound according to Claim 1, wherein the ratio of structural units of the formula (Ia) to structural units of the formula (Ib) is 1:2 to 1:500.
8. (Previously Presented) The polymeric compound according to Claim 1, wherein the ratio of structural units of the formula (Ia) to structural units of the formula (Ic) is 10:1 to 1:200.
9. (Previously Presented). The polymeric compound according to Claim 1, wherein D in the structural units of the formulae (Ia) and (Ib) is bonded via the ortho-position to the olefin or the ylidene unit.
10. (Previously Presented) The polymeric compound according to Claim 1, wherein M in formula (Ia) is ruthenium or osmium.
11. (Previously Presented) The polymeric compound according to Claim 1, wherein B in formula (II) is 1,2-ethanediyl or 1,2-ethenediyl.
12. (Previously Presented) The polymeric compound according to Claim 1, wherein R⁶ and R⁷ in formula (II) are identical and are primary C₅-C₂₀-alkyl radicals, wherein the carbon atom bonded to the nitrogen atom bears a tertiary alkyl radical, or secondary C₃-C₂₀-alkyl radicals, a-tertiary C₄-C₂₀-alkyl radicals, or mono- or poly-substituted phenyl radicals wherein substitutions are in ortho-position, by C₁-C₄-alkyl radicals.

13. (Withdrawn) Process for preparing polymeric compounds, characterized in that compounds of the formula (IIIa) and/or (IIIb)



where

R^1 , L , X^1 and X^2 each have the definition and areas of preference specified in Claim 1 under formula (Ia) and

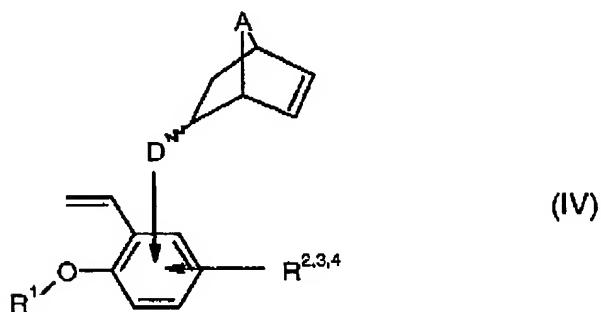
ortho-arylene is an ortho-phenylene or ortho-naphthylene radical, for example 1,2-naphthylene, and the radicals mentioned may also be substituted by one, two, three or four radicals per cycle which are selected from the group of C₁-C₄-alkyl, C₅-C₁₄-aryl and C₁-C₄-alkoxy and

Ar is C₅-C₁₄-aryl and

R^{12} , R^{13} and R^{14} are each independently C₁-C₈-alkyl or C₅-C₁₄-aryl

are reacted

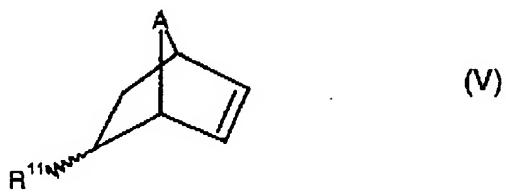
- with at least one compound of the formula (IV)



where

R¹, R², R³, R⁴, A and D have the definition and areas of preference specified under formula (Ia) in Claim 1.

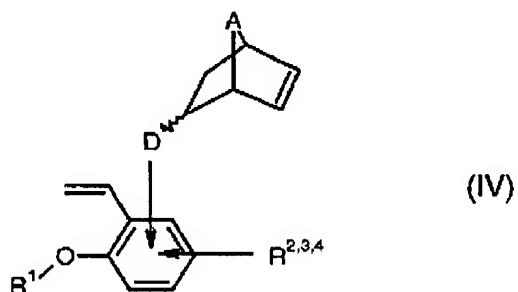
14. (Withdrawn) Process according to Claim 13, characterized in that the reaction is also effected with at least one compound of the formula (V),



where

R¹¹ and A each have the definition and areas of preference specified under formula (Ic) in Claim 2.

15. (Withdrawn) Process according to one or more of Claims 13 or 14, characterized in that the reaction is also effected with one or more further olefins which can be polymerized by ring-opening metathesis.
16. (Previously Presented) A polymeric transition metal catalyst precursor comprising a compound of formula (IV):



where:

R¹, R², R³, R⁴, A and D are each as defined under formula (Ia) in Claim 1.

17. (Previously Presented) A polymeric transition metal catalyst precursor compound comprising: 7-Oxa-2-norborn-2-en-5-ylmethyl 2-isopropoxy-3-ethenylphenyl ether.
18. (Withdrawn) Use of polymeric compounds according to one or more of Claims 1 to 12 as catalysts.
19. (Withdrawn) Process for preparing olefins by catalytic olefin metathesis, characterized in that the catalysts used are polymeric compounds according to one or more of Claims 1 to 12.

20. (Withdrawn) Process according to Claim 19, characterized in that the catalysts are removed from the catalytic reaction mixtures and reused for the preparation of olefins by catalytic olefin metathesis.